

Claims

We claim:

- 5 1. A rail road car bridge plate, comprising:
a beam of sufficient length to span a gap between a pair of adjacent rail road
cars when those cars are coupled together on straight track;
said beam having an upwardly facing surface upon which vehicles can
be conducted;
10 said beam having a pivot fitting mounted thereto, to permit motion of said
beam about an upwardly extending axis.
- 15 2. A bridge plate for a vehicle carrying rail road car, said bridge plate
comprising:
a beam member for spanning a space between two adjacent coupled railroad
cars;
said beam member having a track surface upon which wheeled vehicles can be
conducted;
said beam member having a pivot fitting mounted thereto;
20 said pivot fitting permitting movement of said beam about a pivot axis normal
to said track surface.
- 25 3. A rail road car bridge plate operable to permit vehicles to be conducted
thereover between respective vehicle decks of a pair of first and second longitudinally
coupled rail road cars, said bridge plate comprising:
a beam locatable in a longitudinal orientation relative to the rail road cars to
span a gap therebetween;
said beam having a surface upon which vehicles can be conducted;
said beam having a fitting by which to mount said beam to the first of the rail
30 road cars;
said fitting permitting movement of said beam from said longitudinal
orientation to a cross-wise orientation relative to the first rail road car.
- 35 4. The bridge plate of claim 3 wherein said fitting is chosen from the set of
fittings consisting of
(a) a collar for receiving a pivot pin; or
(b) a pivot pin engageable in a collar;

by which said fitting permits motion of said bridge plate between an extended position spanning a gap between the rail road cars and a storage position.

5. The bridge plate of claim 3 wherein said fitting is a pivot fitting and, when said beam is lying horizontally, said pivot has a vertical position.

6. The bridge plate of claim 3 wherein said beam has a flange defining said surface, said fitting is a pivot fitting having a pivot axis perpendicular to said upper flange.

7. The bridge plate of claim 3 wherein said fitting is a pivot fitting having a pivot axis perpendicular to said surface.

8. The bridge plate of claim 7 wherein said surface has traction bars mounted thereto.

9. The bridge plate of claim 3 further comprising a second fitting, said second fitting being operable to engage a mating fitting of the second rail road car.

10. The bridge plate of claim 3 further comprising a second fitting operable to engage the second rail road car, said first fitting being a pivot fitting and said second fitting being a slide fitting.

11. The bridge plate of claim 3 wherein said second end has the form of a bifurcated toe.

12. The bridge plate of claim 3 wherein said beam has at least one hand grab mounted thereto to facilitate manipulation of said bridge plate.

13. A bridge plate for spanning a length-wise gap between corresponding vehicle decks of a pair of first and second releasably coupled rail road cars, said bridge plate comprising:

- a beam member for supporting the weight of wheeled vehicles, said beam member having an upwardly facing surface upon which vehicles can be conducted between the rail road cars;
- a first fitting for engaging said first rail road car;
- a second fitting for engaging said second rail road car;

said first fitting mounted to connect a first end of said beam to the first rail road car, said first fitting permitting pivotal motion of said bridge plate about a first axis normal to said surface relative to the first rail road car;

5 *Pub a2 a3* said second fitting mounted to connect a second end of said beam to the second rail road car, said second fitting permitting pivotal motion of said bridge plate about a second axis normal to said surface relative to the second rail road car;

10 said second fitting being operable to accommodate variation of distance between the first and second axes while said rail road cars are coupled together and in motion.

15 *Pub a3* 14. The bridge plate of claim 13 wherein, when the rail road cars are uncoupled, said second end of said bridge plate is disengageable from said second rail road car, and is movable about said first axis to a cross-wise storage position.

15. The bridge plate of claim 13 wherein said second fitting includes a slide capable of linear motion relative to the second axis.

20 16. The bridge plate of claim 13 wherein said second end of said beam is bifurcated to form a pair of toes, and said second fitting is a slot defined between said toes.

25 17. The bridge plate of claim 13 wherein said beam includes a top flange, a bottom flange, and webs extending therebetween.

18. The bridge plate of claim 13 wherein said second end of said beam has a handgrab to facilitate manipulation of said beam.

30 19. The bridge plate of claim 13 wherein said beam has a bottom flange, and a plastic pad mounted to said bottom flange.

35 *Pub a4* 20. A bridge plate for spanning a gap between corresponding vehicle decks of a pair of first and second releasably coupled rail road cars, said bridge plate having:
a first pivot fitting mountable to the first rail road car, said pivot fitting permitting pivotal motion of said bridge plate relative to the first rail road car about a first vertical axis;

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a second fitting for engaging the second rail road car, said second fitting including a linear extension member permitting pivotal motion of said bridge plate relative to a second vertical axis fixed relative to the second rail road car; and
said linear extension member tolerating variation in distance between the first and second axes.

10 21. The bridge plate of claim 20 wherein said bridge plate is a beam having an upper flange, a lower flange, and vertical webs extending therebetween.

22. The bridge plate of claim 21 wherein a nylon (t.m.) pad is mounted to said bottom flange.

15 23. The bridge plate of claim 20 wherein said linear extension member is a slot defined in said beam.

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24. A bridge plate kit for spanning a gap between a pair of first and second releasably coupled rail road cars, said kit comprising:

a bridge plate;

a first pivot pin having a first pivot axis, said first pivot pin being mountable to the first rail road car with said first pivot axis in a vertical orientation;

a second pivot pin having a second pivot axis, said second pivot pin being mountable to the second rail road car with said second pivot axis in a vertical orientation; and

a bridge plate having

a first fitting in engagement with said first pivot pin, said bridge plate being pivotable relative to said first pivot axis;

a second fitting in engagement with said second pivot pin, said bridge plate being pivotable relative to said second axis, and said bridge plate being translatable relative to said second axis.

30 25. The bridge plate kit of claim 24 wherein said first fitting is a collar matable with said first pivot pin, and said second fitting is a guide matable with said second pivot pin.

35 26. The bridge plate kit of claim 24 wherein said bridge plate includes a beam member for supporting loads to be conducted between the first and second rail road

cars, said first fitting is a collar mounted to said first pivot pin, and said second fitting is an elongated slot, said second pivot pin being seated in said slot.

5 27. The bridge plate of kit claim 24 wherein said bridge plate includes a beam member for supporting loads to be conducted between said first and second rail road cars, said beam has a pair of toes at one end thereof, and said second fitting is an open ended slot defined between said toes.

10 28. The bridge plate kit of claim 24 wherein said second pivot pin is removable from the second mounting, and said bridge plate has hand grabs to facilitate pivoting of said bridge plate by hand about said first pivot pin.

15 29. The bridge plate kit of claim 24 wherein said kit includes two of said bridge plates, two of said first fittings and tow of said second fittings whereby said bridge plates, when installed, co-operate as a pair of side-by-side wheel trackways to define a pathway between the first and second rail road cars.

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